IN THE CLAIMS

The following claims are pending in the present application:

1. (Original) An electronic package, comprising:

a first device including a microelectronic die having an integrated circuit;

a second device including a first thermal plate; and

a thermal interface material between and in contact with surfaces of the first

and second devices, the thermal interface material including:

at least one polyester matrix material; and

at least one thermally conductive filler dispersed within the polyester

matrix material.

(Original) The electronic package of claim 1, wherein the thermal interface 2.

material is a phase change material.

(Original) The electronic package of claim 1, wherein the polyester matrix 3.

material has a melting point between 40°C and 130°C.

(Original) The electronic package of claim 1, wherein the polyester matrix 4.

material has improved thermo-oxidative stability compared to a polyolefin resin.

(Original) The electronic package of claim 1, wherein the polyester matrix 5.

material is polycaprolactone.

6. (Original) The electronic package of claim 1, wherein the thermal interface

material further includes an additive to modify at least one of modulus, viscosity,

and moisture adsorption.

7. (Original) The electronic package of claim 6, wherein the additive is a

resin.

8. (Original) The electronic package of claim 6, wherein the additive is at

least one of polyolefin, polystyrene, polyacrylate, polyamide, polyimide,

polyarylate, and epoxy.

9. (Original) The electronic package of claim 1, wherein the thermally

conductive filler has a bulk thermal conductivity greater than 50 W/mK.

10. (Original) The electronic package of claim 1, wherein the thermally

conductive filler includes at least one of a ceramic, a metal, and a solder.

11. (Original) The electronic package of claim 1, wherein the thermally

conductive filler includes at least one of zinc oxide, aluminum oxide, boron

nitride, aluminum nitride, aluminum, copper, silver, indium, and tin.

12. (Original) The electronic package of claim 1, wherein the thermally

conductive filler comprises between 10% and 90% of the thermal interface

material be weight.

13. (Original) The electronic package of claim 1, wherein the thermally

conductive filler further includes at least one of a surfactant, coupling agent,

adhesion modifier, wetting agent, colorant, and stabilizer.

14. (Original) The electronic package of claim 1, wherein the thermally

conductive filler further includes a clay.

15. (Original) The electronic package of claim 14, wherein individual platelet

particles of the clay have a thickness of less than 2 nm and a diameter greater

than 10 nm.

16. (Original) The electronic package of claim 14, wherein the clay includes at

least one of montmorillonite, saponite, hectorite, mica, vermiculite, bentonite,

nontronite, beidellite, volkonskoite, magadite, kenyaite, mica, synthetic saponite,

synthetic hectorite, fluoronated montmorillonite, and fluoronated mica.

17. (Original) The electronic package of claim 14, wherein the clay is a

swellable free-flowing powder having a cation exchange capacity from about 0.3

to about 3.0 milliequivalents per gram of mineral (meq/g).

18. (Original) The electronic package of claim 1, wherein the thermal interface

material contacts the die on one side and the thermal plate on an opposing side.

19. (Original) The electronic package of claim 1, wherein the first device

includes a second thermal plate thermally coupled to the die, the thermal

interface material contacting the second thermal plate on one side and the first

thermal plate on an opposing side.

20-27. (Cancelled)

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